lower Yukon Valley, and about freezing in the vicinity of Eagle (longitude 141° W.).

The primary object of the present work was to present in a form for easy reference comparative statistics for the different parts of the United States. This object has been very successfully attained in this volume so far as existing homogeneous observations allow, but the data for many stations will have to be revised when means can be formed for a greater number of years. Nevertheless, the volume is a valuable contribution to the meteorology of the portion of the world with which it deals, and will serve probably to stimulate the directors of some other meteorological services to bring together masses of existing material which are for the most part lying dormant.

DEDICATION OF THE CARNEGIE INSTITUTE.

P. Chalmers Mitchell

THE trustees of the Carnegie Institute had permitted their European guests to select the steamers that suited them, and had taken quarters for them in the new and luxurious Hotel Belmont, 42nd Street, New York. On Wednesday morning, April 10, two special Pullmans and a luncheon car were provided to take the party to Pittsburg, and one or two of the trustees were on board to welcome the guests and to make them known to one another. Amongst the party were Baron d'Estournelles de Constant and M. Paul Doumer, representing the Institut and various French universities; M. Leonce Benedite, director of the Luxembourg; and M. Camille Enlart, director of the Trocadéro Museum, Paris; their Excellencies T. von Moeller, Minister of State, and Lieut.-General von Loewenfeld, Adjutant-General, represented the German Emperor; Privy Councillor Dr. Koser, chief director of the Prussian State Archives and member of the Academy of Sciences, and F. S. Archenhold, director of the Treptow Observatory, represented scientific Germany; Sir Robert Ball, F.R.S., and Dr. Roberts, the Vice-Chancellor, represented the University of Cambridge; Dr. John Rhys represented Oxford University; whilst there were also present Sir Edward Elgar, Sir William Preece, F.R.S., and Dr. Chalmers Mitchell, F.R.S.

Continued snowstorms made it impossible to see much of the wild scenery of the Alleghenies, and the famous horse-shoe curve of the Pennsylvania Railroad was traversed in a regular blizzard. The party reached Pittsburg about 8 p.m., and at the Hotel Schenley, situated in the Schenley Park, a few yards from the Carnegie Institute, found assembled a very large number of Americans representing nearly all the scientific institutions and universities of the United States and from Canada, Principal Peterson and Dr. Bovey from the McGill University, Montreal, and Dr. Galbraith from Toronto.

The proceedings began on Thursday morning, April 11, with a reception of the guests in the founder's room by Mr. Frew, president of the board of trustees, who above all others has been responsible for the translation of Mr. Carnegie's generosity into the actual buildings. This was followed by a reception in the grand foyer of the institute, at which the guests were presented to Mr. and Mrs. Carnegie. After luncheon there was a procession of the guests in uniform or academic costume through lines of cheering students, from the hotel to the institute. At 2 o'clock nominally, actually about 3.30 p.m., the dedication took place. The Cambridge Vice-Chancellor delivered an "invocation," modelled on the university "bidding prayer"; Principal Rhys read a scripture lesson (Proverbs, iii., 9–27), Mr. Carnegie delivered a long address, and M. d'Estournelles de Constant and Theodor von Moeller presented official congratulations from France and Germany.

It was notable, and somewhat humiliating to the English visitors, how elaborately Germany had made official arrangements for showing the sympathy of its Government. At each function Germany was to the fore; there was a personal cable from the Emperor, the Emperor's high representatives appeared with their staff in brilliant uniform, and a special gift of German State records and Blue-books, and the formal return gift from Mr. Carnegie of a cast of Diplodocus, were only characteristic examples of the German activity. The high position and exquisite tact of Baron d'Estournelles de Constant, together with the public announcement made by him a few days later at New York, that the French Government had commissioned him to bestow the Grand Cross of the Legion of Honour on Mr. Carnegie, supported the prestige of France, but although the British subjects who were present ably upheld the position of England in their individual capacities, there was no one formally commissioned to represent the English Government.

On Friday, April 12, there was an informal reception at the technical institute, and a presentation of addresses in the large hall from the various universities and learned bodies throughout the world. There were in addition a number of addresses delivered in whole or in part by the European guests; Sir Robert Ball took as his subject "The Solution of a Great Scientific Difficulty," stating the difficulty in the old supposition that the contraction of its sphere could be the source of the energy radiated out by the sun, and suggesting that the presence of radium offered a solution. Sir W. H. Preece spoke on the connection between science and engineering, tracing the extent to which the art of the engineer had been indebted to the researches of pure science. Dr. Chalmers Mitchell discussed international co-operation in zoology, dealing specially with the necessity for unity in nomenclature and with progress in the international recording of zoological literature. In the evening there was a large banquet, and the proceedings ended on Saturday morning with the ceremony of the conferring of honorary degrees by the Western University of Pennsylvania. The English recipients were as follows:—LL.D., Sir Robert Ball, Sir Robert Cranston, Sir Edward Elgar, Dr. P. Chalmers Mitchell, Sir W. H. Preece, Dr. John Rhys, the Rev. Dr. E. S. Roberts, Dr. John Ross; Litt.D., Mr. C. Moberly Bell and Mr. W. T. Stead.

The Carnegie Institute, the area of which is nearly four acres, and the adjacent technical schools, which when completed will cover with their workshops and yards nearly thirty-two acres, are the "gifts of Andrew Carnegie to the people of Pittsburg," and are dedicated to "literature, science, and art." The total cost, together with a recent endowment for maintenance of more than a million pounds, has been about four million pounds. The management is vested in a board of trustees consisting of local representative men, under whom Dr. W. J. Holland is director of the museum, Mr. John W. Beatty director of the fine arts department, Mr. A. A. Hamerschlag director of the technical schools, whilst Mr. A. H. Hopkins is chief librarian. The exterior of the institute proper is unpretentious, the structure being of steel faced with grey sandstone in a simplified Corinthian style. The interior is a series of gorgeous halls and corridors in marble and gilding, decorated with a striking series of mural paintings by Mr. J. W. Alexander, a

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young American artist. The library contains special rooms for the reference collection, for the lending library, and for children, and at present consists of nearly 1,500,000 volumes, 800,000 of which find place in an eleven-story book-stack. There is a very large music-hall with a fine organ and a magnificent foyer. The fine arts department contains nine galleries, with a floor space of more than 44,000 square feet, and in addition a hall of sculpture and a hall of architecture. The galleries contain a good permanent collection, specially rich in the works of modern artists, with a special section for an annual international exhibition.

The museum, to which there is attached a fine lecture hall, an excellent special library, and a well-equipped series of research rooms, has a floor space of more than 100,000 square feet, arranged in three tiers, of open courts and galleries. On the ground floor there are special collections of gems and coins, particularly rich in specimens from China, India, and Korea, the gifts of John J. Lewis, William Thaw, and Mr. Carnegie. The main hall of the museum is devoted to mineralogy and geology. There is an almost complete collection of local minerals, and a fine series of huge relief maps of the district. The palæontological department is dominated by Diplodocus, but contains many other interesting specimens, in particular a very fine series of Oreodont mammals. The second floor contains galleries devoted to economic botany and to general zoology. There is a large and well-mounted showcase of Steller's sea-lions, and a capital group of Rocky Mountain goats. The bird series is as yet disappointing, but the arrangement of the galleries has only begun. The third floor is devoted to entomology, and Dr. Holland's fine collection of Coleoptera and Lepidoptera has now found a home worthy of its zoological importance. The chief assistants of Dr. Holland are Mr. Douglas Stewart, in the department of mineralogy; Dr. A. E. Ortmann, with P. E. Raymond, Earl Douglass, and O. A. Peterson, in palæontology; Prof. C. V. Hartman, in ethnology; Mr. O. Jennings, in botany; Mr. W. E. C. Todd, in ornithology; and Mr. H. Kahl, in entomology. The chief assistant in the setting up of fossils is Mr. A. S. Coggshall, whilst Mr. F. S. Webster is the taxidermist and Mr. Th. A. Mills the modeller. With such a staff and the ample endowments at his disposal, Dr. Holland has a magnificent opportunity of which he may be expected to take full advantage.

A full description of the technical schools would require many pages. In equipment and staff they are magnificent, and are adapted for the teaching of almost every form of the mechanical arts.

ARCHÆOLOGY AND THE ASSOUAN DAM.

A DESPATCH from the Earl of Cromer, just issued as a White Paper (Cd. 3397), deals with the question of increasing the water supply of Egypt by constructing a new dam or raising the present dam at Assouan. Notes are included by Sir William Garstin, Sir Benjamin Baker, Mr. A. L. Webb, and Captain Lyons, in which the various plans are considered. After examining all possible sites, the opinion expressed is that no alternative exists but that of raising the Assouan dam. Unfortunately, this means the almost complete submersion, during a portion of the year, of the temples at Philæ; and it is therefore important to know what the Egyptian Government intends to do with regard to the Nubian monuments affected by the proposed works.

Captain Lyons points out in his note that since in an arid climate the flood plains are almost the only region where civilisation has been able to develop, a thorough investigation of the monuments in the district to be affected should be made before the water-level is raised. His principal suggestions are summarised as follows:—

> An archæological survey of Nubia should be carried out, at the expense of the Government, and every effort should be made to render it as complete as possible. The different archæological societies in Europe should be invited to cooperate with the Egyptian authorities in this work, by sending representatives to assist in these researches. Wherever possible, the foundations of the monuments submerged should be reconstructed and consolidated, as was done in the case of the Philæ temples. Such repairs as may be considered necessary to insure the stability of their superstructure should also be undertaken. A thorough and complete examination of all the ancient sites, settlements, and cemeteries which will fall within the limits of the raised water-levels should be carried out, and drawings or photographs sufficient to preserve a complete record must be made by competent artists. Lastly, the results of these investigations must be published to the world.

Sir William Garstin does not hesitate to say that this programme will be adopted, and that "the funds necessary for such an object will not be grudged by the Government." If the raising of the dam is preceded by an exact scientific survey, archæology will benefit by an increase of knowledge, while Egypt will gain by an increase of water supply. There ought, however, to be a definite undertaking that the work will be carried out by the Egyptian Government in a reasonable time. We should be glad to know what has been done with regard to the complete archæological survey of the region already submerged. When the proposal was made in 1894 to build a dam at Assouan with its crest 114 metres above mean sea-level, the archæological societies of Europe protested against it in the strongest terms, and the result was the adoption of a modified scheme in which the crest of the dam is eight metres (26 feet) lower than that of the original project. This was of the nature of a compromise, and the Egyptian Government on its part undertook "to carry out an archæological and scientific investigation of the whole of Nubia."

From Captain Lyons's note in the present White Paper we understand that a topographical basis for such a survey has been prepared, but the systematic study of the submerged portion of the Nile valley, from an archæological point of view, has still to be made. As this is a matter for the Egyptian Government, the responsibility for the survey must not be thrown upon archæologists (who not only are not paid, but have to pay for their exploration), but should be borne by the Government.

By the scheme now proposed, the future maximum water-level will stand seven metres (very nearly 23 feet) higher than is the case at present, so that the dam now contemplated will have practically the same height as that of the original project against which archæological societies strongly protested. It is therefore desirable to insist that the promised investigations should be undertaken seriously by the Egyptian Government without delay, and that adequate provision be made for the systematic survey of the region. Unless all records of the earlier civilisation of the region are carefully and accurately collected and studied, as suggested by Captain Lyons, the claims of archæology are likely to be forgotten when the engineering scheme has been approved and the works are in progress.

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